

**Abstract of th Disclosure**

A semiconductor device includes an insulating layer, a conducting portion, and a modified layer. The insulating layer is formed on a semiconductor substrate. The conducting portion is formed in the insulating layer. The modified layer is formed between the insulating layer and the conducting portion. The insulating layer includes hydrogenated polysiloxane. The modified layer is a layer to which the hydrogenated polysiloxane is modified. A portion of the modified layer far from the semiconductor substrate may be thicker than a portion of the modified layer near the semiconductor substrate.